

Keywords: Concurrency control, Trace-driven simulation, Workload characterization

4 The OpenTM Transactional Application Programming Interface
 Woongki Baek, Chi Cao Minh, Martin Trautmann, Christos Kozyrakis, Kunle Olukotun
 September 2007 **PACT '07: Proceedings of the 16th International Conference on Parallel Architectures and Compilation Techniques (PACT 2007) - Volume 00**, v. 1, p. 1-12
Publisher: IEEE Computer Society
 Full text available:  [Pdf](#) (264.87 KB) Additional Information: [full citation](#), [abstract](#)
Bibliometrics: Downloads (6 Weeks): 1, Downloads (12 Months): 65, Download

Transactional Memory (TM) simplifies parallel programming by supporting identified tasks. To date, TM programming has required the use of library calls and annotations to support parallelism. We propose a TM API that provides scalable performance with code ...

5 Two models of concurrent objects
 O. M. Nierstrasz
 April 1989 **Proceedings of the 1988 ACM SIGPLAN workshop on Object-based languages**, p. 1-12
Publisher: ACM
 Full text available:  [Pdf](#) (256.25 KB) Additional Information: [full citation](#), [abstract](#)
Bibliometrics: Downloads (6 Weeks): 4, Downloads (12 Months): 40, Download

We propose two models of concurrent objects that address, respectively, object-oriented and functional programming languages. The first is a conceptual model for concurrent objects and the second is a set of languages for concurrent and ...

Also published in:

April 1989 **SIGPLAN Notices** Volume 24 Issue 4

6 'PRABHA'—a distributed concurrency control algorithm
 Albert Burger, Vijay Kumar
 January 1990 **CSC '90: Proceedings of the 1990 ACM annual conference on Computer systems**, p. 1-12
Publisher: ACM  Full text available:  [Pdf](#) (657.36 KB) Additional Information: [full citation](#), [abstract](#)
Bibliometrics: Downloads (6 Weeks): 2, Downloads (12 Months): 10, Download

We propose a non-preemptive, deadlock free concurrency control mechanism. The algorithm uses a combination of transaction blocking and roll-back locking mechanisms presented in the ...

7 Non-blocking timeout in scalable queue-based spin locks
 Michael L. Scott
 July 2002 **PODC '02: Proceedings of the twenty-first annual symposium on Principles of distributed computing**, p. 1-12
Publisher: ACM  Full text available:  [Pdf](#) (999.45 KB) Additional Information: [full citation](#), [abstract](#)
Bibliometrics: Downloads (6 Weeks): 1, Downloads (12 Months): 34, Download

Queue-based spin locks allow programs with busy-wait synchronization without fear of starvation or performance-destroying contention. Timeout allows a thread to abandon its attempt to acquire ...

Keywords: scalability, spin locks, synchronization, timeout

8 Supporting nested transactional memory in logTM

 **Michelle J. Moravan, Jayaram Bobba, Kevin E. Moore, Luke Yen, Mark D. Hill, and David R. Wood**

November 2006 **ASPLOS-XII**: Proceedings of the 12th international conference on programming languages and operating systems

Publisher: ACM 

Full text available:  Pdf (239.03 KB)

Additional Information: [full citation](#), [abstract](#)

Bibliometrics: Downloads (6 Weeks): 11, Downloads (12 Months): 105, Downloaded 0 times

Nested transactional memory (TM) facilitates software composition by letting one program either knowing whether the other uses transactions. **Closed nested transactional memory** provides a way to nest transactions within a transaction until the toplevel ...

Keywords: logTM, nesting, transactional memory

Also published in:

October 2006 **SIGOPS Operating Systems Review** Volume 40 Issue 5

October 2006 **SIGARCH Computer Architecture News** Volume 34 Issue 5

November 2006 **SIGPLAN Notices** Volume 41 Issue 11

9 Transactions with isolation and cooperation

 **Yannis Smaragdakis, Anthony Kay, Reimer Behrends, Michal Young**

 October 2007 **OOPSLA '07**: Proceedings of the 22nd annual ACM SIGPLAN conference on programming systems and applications

Publisher: ACM 

Full text available:  Pdf (252.95 KB)

Additional Information: [full citation](#), [abstract](#)

Bibliometrics: Downloads (6 Weeks): 12, Downloads (12 Months): 152, Downloaded 0 times

We present the TIC (Transactions with Isolation and Cooperation) mode to standard transactional memory the ability for a transaction to observe points. This allows transactions ...

Keywords: TIC, nested transactions, open-nesting, punctuation, transactional memory

Also published in:

October 2007 **SIGPLAN Notices** Volume 42 Issue 10

10 Approaches to fault-tolerant and transactional mobile agent execution

 **Stefan Pleisch, André Schiper**

 September 2004 **Computing Surveys (CSUR)**, Volume 36 Issue 3

Publisher: ACM 

Full text available:  Pdf (946.94 KB)

Additional Information: [full citation](#), [abstract](#)

Bibliometrics: Downloads (6 Weeks): 37, Downloads (12 Months): 344, Downloaded 0 times

Over the past years, mobile agent technology has attracted considerable attention ...

literature has been published. To further develop mobile agent technology, tolerance and transaction support ...

Keywords: ACID, Byzantine failures, agreement problem, asynchronous, tolerance, malicious places, mobile agents, replication, security, transaction

11 Split hardware transactions: true nesting of transactions using best-effort

Yossi Levy, Jan-Willem Maessen
February 2008 **PPoPP '08: Proceedings of the 13th ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming**

Publisher: ACM [Request Permissions](#)

Full text available: [Pdf \(384.30 KB\)](#)

Additional Information: [full citation](#), [abstract](#)

Bibliometrics: Downloads (6 Weeks): 2, Downloads (12 Months): 83, Download

Transactional Memory (TM) is on its way to becoming the programming paradigm for concurrent, and scalable programs. Hardware TM (HTM) implementation is faster than pure software TM (STM); however, ...

Keywords: atomicity, nesting, transactional memory

12 Maximum benefit from a minimal HTM

Owen S. Hofmann, Christopher J. Rossbach, Emmett Witchel
February 2009 **ASPLOS '09: Proceeding of the 14th international conference on Architectural support for programming languages and operating systems**

Publisher: ACM [Request Permissions](#)

Full text available: [Pdf \(457.43 KB\)](#)

Additional Information: [full citation](#), [abstract](#)

Bibliometrics: Downloads (6 Weeks): 17, Downloads (12 Months): 167, Download

A minimal, bounded hardware transactional memory implementation significantly improves performance when used in an operating system kernel. We add HTM to the grained synchronization structure. The ...

Keywords: hardware transactional memory

Also published in:

February 2009 **SIGPLAN Notices** Volume 44 Issue 3

13 Deadlock detection in distributed database systems: a new algorithmic analysis

Natalija Kriyokapić, Alfons Kemper, Ehud Gudes

October 1999 **The VLDB Journal — The International Journal on Very Large Data Bases**

Publisher: Springer-Verlag New York, Inc.

Full text available: [Pdf \(289.96 KB\)](#)

Additional Information: [full citation](#), [abstract](#)

Bibliometrics: Downloads (6 Weeks): 23, Downloads (12 Months): 134, Download

This paper attempts a comprehensive study of deadlock detection in distributed database systems. The predominant deadlock models in these systems and the four different detection algorithms are discussed. Afterwards, a ...

Keywords: Comparative performance analysis, Deadlock detection, Dis study

14 A new approach to developing and implementing eager database re

 Bettina Kemme, Gustavo Alonso

September 2000 **Transactions on Database Systems (TODS)** , Volume 25

Publisher: ACM  [Request Permissions](#)

Full text available:  Pdf (449.43 KB)

Additional Information: [full citation](#), [abstract](#)

Bibliometrics: Downloads (6 Weeks): 32, Downloads (12 Months): 235, Downl

Database replication is traditionally seen as a way to increase the availability of databases. Although a large number of protocols providing data consistency have been proposed, few of these ideas have ...

Keywords: database replication, fault-tolerance, group communication, replica control, total error multicast

15 Maintaining consistency in a failure-prone P2P database network du

 Md Mehedi Masud, Iluju Kiringa

March 2008 **DaMaP '08: Proceedings of the 2008 international workshop on distributed systems**

Publisher: ACM

Full text available:  Pdf (751.39 KB)

Additional Information: [full citation](#), [abstract](#)

Bibliometrics: Downloads (6 Weeks): 7, Downloads (12 Months): 66, Downloa

A peer database network consists of peers in which each peer has its own local database system (LDBS). In a peer database network, the integration of sources is performed by a peer that shares its local database information ...

16 Dependence-aware transactional memory for increased concurrency

Hany E. Ramadan, Christopher J. Rossbach, Emmett Witchel

November 2008 **MICRO '08: Proceedings of the 2008 41st IEEE/ACM International Conference on Microarchitecture**

Publisher: IEEE Computer Society

Full text available:  Pdf (529.01 KB)

Additional Information: [full citation](#), [abstract](#)

Bibliometrics: Downloads (6 Weeks): 6, Downloads (12 Months): 72, Downloa

Transactional memory (TM) is a promising paradigm for helping programs run on core platforms. Though they perform well under low contention, hardware issues are preventing them from performing well under high contention, ...

17 Priority assignment in real-time active databases

Rajendran M. Sivasankaran, John A. Stankovic, Don Towsley, Bhaskar Puri

January 1996 **The VLDB Journal — The International Journal on Very Large Data Bases**

Publisher: Springer-Verlag New York, Inc.

Full text available:  Pdf (634.63 KB)

Additional Information: [full citation](#), [abstract](#)

Bibliometrics: Downloads (6 Weeks): 3, Downloads (12 Months): 37, Downloa

Active databases and real-time databases have been important areas of

recognized that many benefits can be gained by integrating real-time and distributed systems. However, not much work has been done ...

Keywords: Active databases - Coupling mode - Deadlines - ECA - Priorities

18 [Tolerating byzantine faults in transaction processing systems using consensus](#)

 [Ben Vandiver, Hari Balakrishnan, Barbara Liskov, Sam Madden](#)
October 2007 **SOSP '07**: Proceedings of twenty-first ACM SIGOPS symposium

Publisher: ACM  [Request Permissions](#)

Full text available:  [Pdf \(390.75 KB\)](#)

Additional Information: [full citation](#), [abstract](#)

Bibliometrics: Downloads (6 Weeks): 13, Downloads (12 Months): 139, Downloaded 0 times

This paper describes the design, implementation, and evaluation of a replicated consensus scheme for tolerating byzantine faults in transaction processing database systems. The scheme compares replicated data across multiple replicas which are unmodified, ...

Keywords: byzantine fault tolerance, databases, state machine replication

Also published in:

October 2007 **SIGOPS Operating Systems Review** Volume 41 Issue 6

19 [Performance modeling of nested transactions in database systems](#)

[Hossam S. Hassanein, Mohamed E. El-Sharkawi](#)

November 2000 **CASCON '00**: Proceedings of the 2000 conference of the Canadian Society for Information and Computer Sciences
Collaborative research

Publisher: IBM Press

Full text available:  [Pdf \(148.66 KB\)](#)

Additional Information: [full citation](#), [abstract](#)

Bibliometrics: Downloads (6 Weeks): 14, Downloads (12 Months): 49, Downloaded 0 times

The nested transaction model was introduced to satisfy the requirement of distributed transaction processing. Moreover, it is currently the basic transaction model for new databases and objectrelational databases. ...

Keywords: nested transactions, performance evaluation, simulation, transaction processing

20 [User-level transactional programming in Haskell](#)

 [Peter Thiemann](#)
September 2006 **Haskell '06**: Proceedings of the 2006 ACM SIGPLAN workshop on Haskell

Publisher: ACM  [Request Permissions](#)

Full text available:  [Pdf \(212.38 KB\)](#)

Additional Information: [full citation](#), [abstract](#)

Bibliometrics: Downloads (6 Weeks): 6, Downloads (12 Months): 100, Downloaded 0 times

Correct handling of concurrently accessed external resources is a demanding problem in Haskell. Standard approaches rely on database transactions or concurrency mechanisms. Haskell provides two such resources, global variables and ...

The ACM Portal is published by the Association for Computing Machinery. Copyright © 2009 ACM, Inc. All rights reserved.
[Terms of Usage](#) [Privacy Policy](#) [Code of Ethics](#) [Contact Us](#)

Useful downloads:  [Adobe Acrobat](#)  [QuickTime](#)  [Windows Media Player](#) 